

sub
21
truncation may occur further comprises selecting one of the indications based on the target device.

CO
con-
73. (Amended) The method defined in Claim 68 wherein truncating comprises truncating target resolution coefficients, coded separately in each coding unit, from the embedded codestream.

74. (Amended) The method of Claim 68 wherein the target device comprises a low resolution, high pixel depth embedded target such that decoding decodes as many higher level coefficients as needed to achieve full pixel depth and low spatial resolution of the target device.

sub
21
76. (Amended) The method defined in Claim 68 further comprising:
selecting coding units based on an amount of available buffering at the target device; and
truncating each coding unit with more data than available buffering.

77. (Amended) The method defined in Claim 68 wherein truncating further comprises:
determining a uniform amount to truncate each coding unit; and
truncating at least a portion of at least one importance level in each coding unit.

78. (Amended) The method defined in Claim 77 wherein truncation is performed using information in a header of the codestream setting forth importance level information.

79. (Amended) The method defined in Claim 77 wherein truncation is performed using information in a header of the codestream setting forth importance level information for each coding unit in the codestream.

80. (Amended) The method defined in Claim 77 being performed after encode time.

Please add the following new claims:

94. (New) An apparatus comprising a computer-readable medium having stored thereon sequences of instructions that, when executed, cause one or more processors to:

identify a target device to receive data in the embedded codestream;

decode each bit-plane to provide data to the target device by truncating each bit-plane in the embedded codestream for data necessary to support the target device.

95. (New) The apparatus defined in Claim 94 wherein each bit-plane is truncated based on an indication in each coding unit denoting a location where truncation may occur.

96. (New) The apparatus defined in Claim 95 wherein the indication comprises a marker.

97. (New) The apparatus defined in Claim 95 wherein the indication comprises a pointer.

98. (New) The apparatus defined in Claim 94 wherein the instructions that cause each bit-plane is truncated based on one of a plurality of indications in each coding unit denoting where truncation may occur further comprise instructions that, when executed, cause the one or more processors to select one of the indications based on the target device.

99. (New) The apparatus defined in Claim 94 wherein the instructions that cause the one or more processors to truncate comprises instructions that, when executed, cause the one or more processors to truncate target resolution coefficients, coded separately in each coding unit, from the embedded codestream.

100. (New) The apparatus of Claim 94 wherein the target device comprises a low resolution, high pixel depth embedded target such that the instructions that cause the one or more processors to decode cause the one or more processors to decode as many higher level coefficients as needed to achieve full pixel depth and low spatial resolution of the target device.

Sub
21

101. (New) The apparatus defined in Claim 94 wherein the target device comprises a high resolution, low pixel depth embedded target and truncating each coding unit at a number of bit-planes and inverse wavelet transforming the non-truncated data of each coding unit to achieve the low pixel depth and high spatial resolution of the target device.

CU
con's

102. (New) The apparatus defined in Claim 94 further comprising instructions that, when executed, cause the one or more processors to:

select coding units based on an amount of available buffering at the target device;

and

truncate each coding unit with more data than available buffering.

103. (New) The apparatus defined in Claim 94 wherein the instructions that cause the one or more processors to truncate further comprise instructions that, when executed cause the one or more processors to:

determine a uniform amount to truncate each coding unit; and

truncate at least a portion of at least one importance level in each coding unit.

104. (New) The apparatus defined in Claim 103 wherein truncation is performed using information in a header of the codestream setting forth importance level information.

Sub
21
105. (New) The apparatus defined in Claim 103 wherein truncation is performed using information in a header of the codestream setting forth importance level information for each coding unit in the codestream.

CU
con't
106. (New) A method for processing data, the method comprising:
transforming the input data into a plurality of coefficients using a reversible wavelet filter;
generating an embedded codestream in response to the plurality of coefficients;
binary entropy coding the embedded codestream to produce the compressed data stream; and
parsing the compressed data stream.

107. (New) A method comprising:
receiving coded data that has been generated by
transforming the input data into a plurality of coefficients using a reversible wavelet filter,
generating an embedded codestream in response to the plurality of coefficients, and
binary entropy coding the embedded codestream to produce the coded data in a codestream; and
parsing the codestream.

108. (New) The method defined in Claims 106 or 107 further comprising:

decoding data in the codestream; and
supplying decoded data to a target device.

109. (New) The method defined in Claim 108 further comprising truncating a portion of the codestream based on the target device.

110. (New) The method defined in Claim 109 wherein truncating a portion of the codestream comprises truncating coding units in the codestream.

111. (New) The method defined in Claim 110 wherein truncating coding units in the codestream is based on information in the header of the codestream.

112. (New) The method defined in Claim 111 wherein the information in the header includes significance information indicating the significance of coding units.

113. (New) The method defined in Claim 112 wherein the information in the header indicates where truncation may occur.

114. (New) The method defined in Claim 113 wherein the information comprises a marker.

115. (New) The method defined in Claim 113 wherein the information comprises a pointer.

116. (New) The method defined in Claim 113 wherein the information indicates where truncation may occur in each bit plane.

117. (New) The method defined in Claim 110 wherein truncating coding units in the codestream is based on significance.

118. (New) The method defined in Claim 108 wherein the target device comprises a low resolution, high pixel depth embedded target, and further wherein decoding data in the codestream comprises decoding only higher level coefficients needed to achieve full pixel depth and low spatial resolution of the target device.

119. (New) The method defined in Claim 108 wherein the target device comprises a high resolution, low pixel depth embedded target, and further wherein decoding data in the codestream comprises decoding only higher level coefficients needed to achieve low pixel depth and high spatial resolution of the target device.

120. (New) An article of manufacture comprising one or more recordable media having executable instructions stored thereon which, when executed by a system, causes the system to process data by:

transforming the input data into a plurality of coefficients using a reversible wavelet filter;

generating an embedded codestream in response to the plurality of coefficients;

binary entropy coding the embedded codstream to produce the compressed data stream; and
parsing the compressed data stream.

121. (New) An article of manufacture comprising one or more recordable media having executable instructions stored thereon which, when executed by a system, causes the system to process data by:

receiving coded data that has been generated by

transforming the input data into a plurality of coefficients using a reversible wavelet filter,

generating an embedded codestream in response to the plurality of coefficients, and

binary entropy coding the embedded codestream to produce the coded data in a codestream; and

parsing the codestream.

122. (New) The article of manufacture defined in Claims 120 or 121 further comprising instructions which, when executed by the system, cause the system to:

decode data in the codestream; and

supply decoded data to a target device.

123. (New) The article of manufacture defined in Claim 122 further comprising instructions which, when executed by the system, cause the system to truncate a portion of the codestream based on the target device.

124. (New) The article of manufacture defined in Claim 123 wherein the instructions that cause the system to truncate a portion of the codestream comprises instructions, which when executed by the system cause the system to truncate coding units in the codestream.

CU
con's
125. (New) The article of manufacture defined in Claim 124 wherein the instructions that cause the system to truncate coding units in the codestream operate on information in the header of the codestream.

126. (New) The article of manufacture defined in Claim 125 wherein the information in the header includes significance information indicating the significance of coding units.

127. (New) The article of manufacture defined in Claim 126 wherein the information in the header indicates where truncation may occur.

128. (New) The article of manufacture defined in Claim 127 wherein the information comprises a marker.

129. (New) The article of manufacture defined in Claim 127 wherein the information comprises a pointer.

130. (New) The article of manufacture defined in Claim 127 wherein the information indicates where truncation may occur in each bit plane.

131. (New) The article of manufacture defined in Claim 124 wherein instructions causing the system to truncate coding units in the codestream causes truncation based on significance.

CU
CON'S
132. (New) The article of manufacture defined in Claim 122 wherein the target device comprises a low resolution, high pixel depth embedded target, and further wherein instructions to cause the system to decode data in the codestream comprises instructions which, when executed by the system, cause the system to decode only higher level coefficients needed to achieve full pixel depth and low spatial resolution of the target device.

133. (New) The article of manufacture defined in Claim 122 wherein the target device comprises a high resolution, low pixel depth embedded target, and further wherein instructions to cause the system to decode data in the codestream comprises instructions which, when executed by the system, cause the system to decode only higher level coefficients needed to achieve low pixel depth and high spatial resolution of the target device.

134. (New) An apparatus for processing data comprising:
means for transforming the input data into a plurality of coefficients using a reversible wavelet filter;
means for generating an embedded codestream in response to the plurality of coefficients;
means for binary entropy coding the embedded codstream to produce the compressed data stream; and
means for parsing the compressed data stream.

CU
con's

135. (New) An apparatus comprising:
means for receiving coded data that has been generated by
transforming the input data into a plurality of coefficients using a reversible wavelet filter,
generating an embedded codestream in response to the plurality of coefficients, and
binary entropy coding the embedded codestream to produce the coded data in a codestream; and
means for parsing the codestream.

136. (New) The apparatus defined in Claims 134 or 135 further comprising:
means for decoding data in the codestream; and
means for supplying decoded data to a target device.

137. (New) The apparatus defined in Claim 136 further comprising means for truncating a portion of the codestream based on the target device.

138. (New) The apparatus defined in Claim 137 wherein the means for truncating a portion of the codestream comprises means for truncating coding units in the codestream.

139. (New) The apparatus defined in Claim 138 wherein the means for truncating coding units in the codestream operates based on information in the header of the codestream.

140. (New) The apparatus defined in Claim 139 wherein the information in the header includes significance information indicating the significance of coding units.

141. (New) The apparatus defined in Claim 140 wherein the information in the header indicates where truncation may occur.

142. (New) The apparatus defined in Claim 141 wherein the information comprises a marker.

143. (New) The apparatus defined in Claim 141 wherein the information comprises a pointer.